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## PATENT APPLICATION

### IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of

Docket No: Q79610

Susumu KAYAMA, et al.

Appln. No.: 10/586,540

Group Art Unit: to be assigned

Confirmation No.: to be assigned

Examiner: to be assigned

Filed: July 19, 2006

For: METAL OXIDE DISPERSION, METAL OXIDE ELECTRODE FILM, AND DYE  
SENSITIZED SOLAR CELL

#### **INFORMATION DISCLOSURE STATEMENT** **UNDER 37 C.F.R. §§ 1.97 and 1.98**

#### **MAIL STOP AMENDMENT**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

In accordance with the duty of disclosure under 37 C.F.R. § 1.56, Applicant hereby notifies the U.S. Patent and Trademark Office of the documents which are listed on the attached PTO/SB/08 A & B (modified) form and/or listed herein and which the Examiner may deem material to patentability of the claims of the above-identified application.

One copy of each of the listed documents is submitted herewith, except for the following:  
U.S. patents and/or U.S. patent publications; and co-pending non-provisional U.S. applications filed after June 30, 2003.

The present Information Disclosure Statement is being filed: (1) No later than three months from the application's filing date; (2) Before the mailing date of the first Office Action on the merits (whichever is later); or (3) Before the mailing date of the first Office Action after

INFORMATION DISCLOSURE STATEMENT

U.S. Appln. No.: 10/586,540

filing a request for continued examination (RCE) under §1.114, and therefore, no Statement under 37 C.F.R. § 1.97(e) or fee under 37 C.F.R. § 1.17(p) is required.

In compliance with the concise explanation requirement under 37 C.F.R. § 1.98(a)(3) for foreign language documents, Applicant submits the following explanations: Applicant encloses an English-language abstract for each of the cited Japanese patent applications; and the published PCT application contains an English-language abstract on the cover page; partial English-language translations of the Kiyona and Hashimoto references; and the disclosure on page 40 of the present specification constitutes a concise statement of relevance of Izumi Nakai et al. reference.

The submission of the listed documents is not intended as an admission that any such document constitutes prior art against the claims of the present application. Applicant does not waive any right to take any action that would be appropriate to antedate or otherwise remove any listed document as a competent reference against the claims of the present application.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

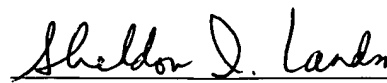
Respectfully submitted,

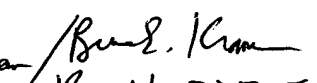
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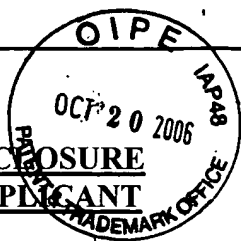
  
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Date: October 20, 2006

Substitute for Form 1449 A &amp; B/PTO

**INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT**

(use as many sheets as necessary)



Complete if Known

Application Number	10/586,540
Confirmation Number	To be assigned
Filing Date	July 19, 2006
First Named Inventor	Susumu KAYAMA
Art Unit	To be assigned
Examiner Name	To be assigned
Attorney Docket Number	Q79610

Sheet 1 of 1

**U.S. PATENT DOCUMENTS**

Examiner Initials*	Cite No. <sup>1</sup>	Document Number		Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document
		Number	Kind Code <sup>2</sup> (if known)		
		US			
		US			

**FOREIGN PATENT DOCUMENTS**

Examiner Initials*	Cite No. <sup>1</sup>	Foreign Patent Document			Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Translation <sup>6</sup>
		Country Code <sup>3</sup>	Number <sup>4</sup>	Kind Code <sup>5</sup> (if known)			
		WO	01/16027	A1	03/08/2001	Showa Denko K.K.	Abstract
		JP	10112337	A	04/28/1998	Nikon Corp.	Abstract
		JP	11288745	A	10/19/1999	Nikon Corp.	Abstract
		JP	2001-283942	A	10/12/2001	Hitachi Maxell Ltd.	Abstract
		JP	2003-308890	A	10/31/2003	Bridgestone Corp.	Abstract

**NON PATENT LITERATURE DOCUMENTS**

Examiner Initials*	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city, and/or country where published.	Translation <sup>6</sup>
		BARBÉ, et al., "Nanocrystalline Titanium Oxide Electrodes for Photovoltaic Applications," <i>J. Am. Ceram. Soc.</i> 80:3157-3171 (1997).	
		HART, et al., "Grinding Low-Soda Alumina," <i>Ceramic Bulletin</i> 43:13-17 (1964).	
		HASHIMOTO, et al., "All Aspects of the Titanium Dioxide Photocatalyst," <i>CMC</i> , pp. 28-31 (1998).	Partial trans. p. 29, 1.18 to p. 30, 1.5
		KIYONO, et al., "Titanium Dioxide," <i>Gihodo</i> , pp. 128-131 (1991).	Partial trans. p. 128, 1.14 to p. 129, 1.4
		IZUMI NAKAI, et al., "Funmatsu X-sen Kaiseki no Jissai (Practical Powder X-ray Analysis)", Asakura Shoten (2002).	
		O'REGAN AND GRÄTZEL, "A Low-Cost, High Efficiency Solar Cell Based on Dye-Sensitized Colloidal TiO <sub>2</sub> Films," <i>Nature</i> 353:737-740 (1991).	
		PICHOT, PITTS and GREGG, "Low-Temperature Sintering of TiO <sub>2</sub> Colloids: Application to Flexible Dye-Sensitized Solar Cells," <i>Langmuir</i> 16:5625-5630 (2000).	
		POTTIER, et al., "Synthesis of Brookite TiO <sub>2</sub> Nanoparticles by Thermolysis of TiCl <sub>4</sub> in Strongly Acidic Aqueous Media," <i>J. Mater. Chem.</i> 11:1116-1121 (2001).	

Examiner Signature		Date Considered	
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\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup>Applicant's unique citation designation number (optional). <sup>2</sup>See Kind Codes of USPTO Patent Documents at [www.uspto.gov](http://www.uspto.gov), MPEP 901.04 or follow the hyperlink from the title of the document to the intranet. <sup>3</sup>Enter Office that issued the document, by the two-letter code (WIPO Standard ST. 3). <sup>4</sup>For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup>Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. <sup>6</sup>Applicant is to indicate here if English language Translation is attached.